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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,907	04/25/2007	Toru Nishimura	0425-1253PUS1	7128

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EXAMINER

QIAN, YUN

ART UNIT	PAPER NUMBER
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1793

NOTIFICATION DATE	DELIVERY MODE
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11/13/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/574,907	Applicant(s) NISHIMURA ET AL.	
	Examiner YUN QIAN	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/7/2006, 4/6/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5 and 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "...a powdery catalyst....". It is not clear what the powdery catalyst denotes. For purpose of examination, the Examiner interpreting "powdery catalyst" is an active metal.

Claims 8-9 recite the limitation "...the substrate...." There is insufficient antecedent basis for this limitation in these claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Yokota et al. (US 4,625,063) in view of Mizumoto et al (US 4,631,263).

Art Unit: 1793

Regarding claims 1 and 10, Yokota et al. teaches a process of production a tertiary amine from an alcohol or an aldehyde and a primary or second amine, using a catalyst of copper, nickel and a noble metal (Abstract, and claim 1).

However, Yokota et al. fails to teach using a film-type catalyst. Mizumoto et al teaches a water-repellent catalyst suitable for gas/liquid reactions (such as in the production of a tertiary amine from an alcohol via hydrogen injection) comprising of a sheet or film-type carrier and a catalytically active component supported on at least one surface of carrier (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the film-type catalyst taught by Mizumoto et al. in the process of Yokota, motivated by the fact that Mizumoto et al. discloses that such film-type catalysts provide improved gas (H_2) permeability and thus lead to better catalytic efficiencies (abstract, and col. 5, lines 15-16).

Regarding claims 2-5, Mizumoto et al. discloses the catalytically active metal, which is carried on at least one surface of film (substrate) and has a thickness of 50 μm to 50 \AA . A mean pore size of carriers has 0.1 to 10 μm and a porosity of 50-95% (col. 3, lines 19-28). The ratio of the active metal to the total weight of carrier taught by Mizumoto is 0.1 to 10%wt.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota and Mizumoto as applied to claims 1-5 above, and further in view of Nishino et. al. (JP 55-149355).

Regarding claims 6, Mizumoto et al discloses the carrier for the film-type catalyst comprising thermosetting polymer, such as polytetrafluoroethylene as instant claim 6 (col. 3, lines 5-19).

Regarding claim 7, although Mizumoto et al. does not specially teach using phenol resin, Nishino et al teaches a process of making a phenol resin supported oxidation catalyst. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute polytetrafluoroethylene of Mizumoto with phenol resin of Nishino. As both materials are equivalent as being thermosetting polymers, it would have a reasonable expectation of success. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Regarding claim 8-9, the Mizumoto illustrates an example of a catalyst prepared by arranging four sheets of catalyst diaphragms in parallel and the structure of support members can have pores, such as a fine-wire net, a lattice form plate, which encompasses the instant claims (FIG. 5, col. 3, lines 52 to col.5, lines 25).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUN QIAN whose telephone number is (571)270-5834. The examiner can normally be reached on Monday-Thursday, 10:00am -4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax

Art Unit: 1793

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/
Supervisory Patent Examiner, Art Unit 1793

/YUN QIAN/
Examiner, Art Unit 1793